



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2014-0188; Directorate Identifier 2013-NM-157-AD; Amendment 39-18079; AD 2015-02-12]**

**RIN 2120-AA64**

**Airworthiness Directives; Bombardier, Inc. Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Bombardier, Inc. Model DHC-8-400 series airplanes. This AD was prompted by reports of two in-service incidents where one side of the main landing gear (MLG) did not achieve down-lock. This AD requires doing a detailed inspection of the apex joints of the stabilizer brace lock link in the MLG for clearance; rectifying and repairing the clearance gap, if necessary; and lubricating the apex joints of the stabilizer brace lock link in the MLG. We are issuing this AD to detect and correct insufficiently greased stabilizer brace lock linkage of the MLG and over-torqued lock linkage attachment bolts, which could lead to the failure to extend and down-lock the MLG, and could affect the safe landing of the airplane.

**DATES:** This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may examine the AD docket on the Internet at

<http://www.regulations.gov/#!docketDetail;D=FAA-2014-0188> or in person at the Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email [thd.qseries@aero.bombardier.com](mailto:thd.qseries@aero.bombardier.com); Internet <http://www.bombardier.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

**FOR FURTHER INFORMATION CONTACT:** Luke Walker, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7363; fax 516-794-5531.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Bombardier, Inc. Model DHC-8-400 series airplanes. The NPRM published in the Federal Register on April 8, 2014 (79 FR 19299).

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2013-19, dated July 18, 2013 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition certain Bombardier, Inc. Model DHC-8-400 series airplanes. The MCAI states:

There have been two reported in-service incidents where one side of the main landing gear (MLG) did not achieve down-lock resulting in a gear unsafe indication. In both cases, the MLG was ultimately extended and down-lock was achieved through the use of the alternate extension system or by cycling the MLG. The investigation revealed that in both cases, the MLG stabilizer brace lock linkages were insufficiently greased and the lock linkage attachment bolts were over-torqued.

Failure to extend and down-lock the MLG could adversely affect the safe landing of the aeroplane.

This [TCCA] AD mandates the [detailed] inspection, rectification [and repair the clearance gap] as required, and lubrication of both MLG stabilizer brace lock link apex joints.

You may examine the MCAI in the AD docket on the Internet at

<http://www.regulations.gov/#!documentDetail;D=FAA-2014-0188-0002>.

## **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (79 FR 19299, April 8, 2014) and the FAA's response to each comment.

### **Request to Include Only Requirements that Affect the Unsafe Condition**

Horizon Air requested that the NPRM (79 FR 19299, April 8, 2014) require only the section of the Accomplishment Instructions that corrects the unsafe condition. Horizon Air stated that the job set-up and close-out sections specified in the Accomplishment Instructions of Bombardier Service Bulletin 84-32-121, dated May 27, 2013, do not directly correct the unsafe condition. Horizon Air also stated that incorporating the job set-up and close-out sections as a requirement of the NPRM restricts the operator's ability to perform other maintenance in conjunction with the incorporation of the service information. Horizon Air stated that it would like the NPRM to mandate section 3.B. of the Accomplishment Instructions, which addresses the unsafe condition.

We agree with the commenter's request and rationale. We have changed paragraphs (g), (g)(2), and (h) of this AD to specify that the actions be done in accordance with paragraph 3.B., "Procedure," of the Accomplishment Instructions of Bombardier Service Bulletin 84-32-121, dated May 27, 2013.

### **Request to Remove Requirement to Include AD Reference in Repair Approvals**

Horizon Air requested that the sentence in paragraph (g)(2) of the NPRM (79 FR 19299, April 8, 2014), stating, "For a repair method to be approved, the repair approval

must specifically refer to this AD,” be removed. Horizon Air stated the sentence should not be included in the NPRM, or at the very least it should be modified because it will place an unnecessary regulatory burden on operators with airplanes built in Canada.

Horizon Air stated that Transport Canada Civil Aviation (TCCA) is the aviation authority for the Bombardier, Inc. Model DHC-8-400 series airplanes. Horizon Air also stated that the NPRM restates the requirement of the Canadian AD. Horizon Air stated that any repairs created by Bombardier, Inc. would have to be in compliance with the Canadian AD and the repair would specifically refer to the Canadian AD. Horizon Air stated that the bilateral agreement between Canada and the United States accepts documents approved by TCCA as meeting the requirements for FAA approval. Horizon Air asked whether the FAA AD number is really necessary when the repair is approved by TCAA and specifically refers to the Canadian AD. Horizon Air also stated that the repair meets the approval requirements from TCAA.

Horizon Air stated that the language specified in paragraph (g)(2) of the NPRM would force an operator who incorporated a repair method prior to the effective date of the AD to go back to the manufacturer and request a revision to the repair method to add the FAA AD number, even if the repair method referenced the Canadian AD.

Horizon Air stated that it has discussed this statement with Bombardier Aerospace, and the Q400 Engineering Department Management stated it is under the TCCA “umbrella” and it can only make reference to a Canadian AD on its repair drawings. Horizon Air stated that if this requirement is retained in the NPRM it would require an operator to somehow have a repair drawing revised to include the FAA AD

number. Horizon Air also stated that this statement in the NPRM should allow the Canadian AD number to be equivalent to the FAA AD number.

Horizon Airlines stated that an operator could pursue an alternative method of compliance (AMOC), but that would add additional time and cost to comply with the NPRM. Horizon Airlines also stated that the additional time required for an AMOC will most likely delay the airplane's return to service. Horizon Airlines stated that if the AMOC is needed on a weekend or on a Federal holiday, the return to service would take even longer.

We concur with the commenter's request to remove from this AD the requirement that repair approvals specifically refer to this AD.

Since late 2006, we have included a standard paragraph titled "Airworthy Product" in all MCAI ADs in which the FAA develops an AD based on a foreign authority's AD. The MCAI or referenced service information in an FAA AD often directs the owner/operator to contact the manufacturer for corrective actions, such as a repair. Briefly, the Airworthy Product paragraph allowed owners/operators to use corrective actions provided by the manufacturer if those actions were FAA-approved. In addition, the paragraph stated that any actions approved by the State of Design Authority (or its delegated agent) are considered to be FAA-approved.

In the NPRM (79 FR 19299, April 8, 2014), we proposed to prevent the use of repairs that were not specifically developed to correct the unsafe condition, by requiring that the repair approval provided by the State of Design Authority or its delegated agent specifically refer to this FAA AD. This change was intended to clarify the method of

compliance and to provide operators with better visibility of repairs that are specifically developed and approved to correct the unsafe condition. In addition, we proposed to change the phrase “its delegated agent” to include “the Design Approval Holder (DAH) with a State of Design Authority’s design organization approval (DOA)” to refer to a DAH authorized to approve required repairs for the AD.

Comments were provided to another NPRM (Directorate Identifier 2012-NM-101-AD (79 FR 19299, April 8, 2014)) about these proposed changes. One commenter (UPS) to that NPRM stated the following: “The proposed wording, being specific to repairs, eliminates the interpretation that Airbus messages are acceptable for approving minor deviations (corrective actions) needed during accomplishment of an AD mandated Airbus service bulletin.”

This comment has made the FAA aware that some operators have misunderstood or misinterpreted the Airworthy Product paragraph to allow the owner/operator to use messages provided by the manufacturer as approval of deviations during the accomplishment of an AD-mandated action. The Airworthy Product paragraph does not approve messages or other information provided by the manufacturer for deviations to the requirements of the AD-mandated actions. The Airworthy Product paragraph only addresses the requirement to contact the manufacturer for corrective actions for the identified unsafe condition and does not cover deviations from other AD requirements. However, deviations to AD-required actions are addressed in 14 CFR 39.17, and anyone may request the approval for an alternative method of compliance to the AD-required actions using the procedures found in 14 CFR 39.19.

To address this misunderstanding and misinterpretation of the Airworthy Product paragraph, we have changed that paragraph and retitled it “Contacting the Manufacturer.” This paragraph now clarifies that for any requirement in this AD to obtain corrective actions from a manufacturer, the actions must be accomplished using a method approved by the FAA, TCCA, or Bombardier, Inc.’s TCCA Design Approval Organization (DAO).

The Contacting the Manufacturer paragraph also clarifies that, if approved by the DAO, the approval must include the DAO-authorized signature. The DAO signature indicates that the data and information contained in the document are TCCA-approved, which is also FAA-approved. Messages and other information provided by the manufacturer that do not contain the DAO-authorized signature approval are not TCCA-approved, unless TCCA directly approves the manufacturer’s message or other information.

This clarification does not remove flexibility afforded previously by the Airworthy Product paragraph. Consistent with long-standing FAA policy, such flexibility was never intended for required actions. This is also consistent with the recommendation of the AD Implementation Aviation Rulemaking Committee to increase flexibility in complying with ADs by identifying those actions in manufacturers’ service instructions that are “Required for Compliance” with ADs. We continue to work with manufacturers to implement this recommendation. But once we determine that an action is required, any deviation from the requirement must be approved as an alternative method of compliance.



Other commenters pointed out that in many cases the foreign manufacturer's service bulletin and the foreign authority's MCAI may have been issued some time before the FAA AD. Therefore, the DAO may have provided U.S. operators with an approved repair, developed with full awareness of the unsafe condition, before the FAA AD is issued. Under these circumstances, to comply with the FAA AD, the operator would be required to go back to the manufacturer's DAO and obtain a new approval document, adding time and expense to the compliance process with no safety benefit.

Based on the comment, we removed the requirement from this AD that the DAH-provided repair specifically refer to this AD. Before adopting such a requirement in the future, the FAA will coordinate with affected DAHs and verify they are prepared to implement means to ensure that their repair approvals consider the unsafe condition addressed in an AD. Any such requirements will be adopted through the normal AD rulemaking process, including notice-and-comment procedures, when appropriate.

We have also decided not to include a generic reference to either the "delegated agent" or the "DAH with State of Design Authority design organization approval," but instead we will provide the specific delegation approval granted by the State of Design Authority for the DAH.

## **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (79 FR 19299, April 8, 2014) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (79 FR 19299, April 8, 2014).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

#### **Related Service Information**

Bombardier, Inc., has issued Bombardier Service Bulletin 84-32-121, dated May 27, 2013. This service information describes doing a detailed inspection of the apex joints of the stabilizer brace lock link in the MLG for clearance; rectifying and repairing the clearance gap, if necessary; and lubricating the apex joints of the stabilizer brace lock link in the MLG. You can find this information at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0188.

#### **Costs of Compliance**

We estimate that this AD affects 75 airplanes of U.S. registry.

We also estimate that it will take about 3 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$0 per product. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$19,125, or \$255 per product.

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this AD.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2014-0188>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone 800-647-5527) is in the ADDRESSES section.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**2015-02-12 Bombardier, Inc.:** Amendment 39-18079. Docket No. FAA-2014-0188; Directorate Identifier 2013-NM-157-AD.

**(a) Effective Date**

This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Bombardier, Inc. Model DHC-8-400, -401 and -402 airplanes, certificated in any category, serial numbers 4001 through 4454 inclusive.

**(d) Subject**

Air Transport Association (ATA) of America Code 32; Main Landing Gear.

**(e) Reason**

This AD was prompted by reports of two in-service incidents where one side of the main landing gear (MLG) did not achieve down-lock. We are issuing this AD to detect and correct insufficiently greased stabilizer brace lock linkage of the MLG and over-torqued lock linkage attachment bolts, which could lead to the failure to extend and down-lock the MLG, and could affect the safe landing of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Inspection**

Within 1,000 flight hours or 6 months after the effective date of this AD, whichever occurs first: Do a detailed inspection of the apex joints of the stabilizer brace lock link in the main landing gear (MLG) for clearance, in accordance with paragraph 3.B., "Procedure," of the Accomplishment Instructions of Bombardier Service Bulletin 84-32-121, dated May 27, 2013.

(1) If the clearance gap is 0.001 inches (0.025 millimeters) or greater, do the action in paragraph (h) of this AD at the time specified in paragraph (h) of this AD.

(2) If the clearance gap is less than 0.001 inches (0.025 millimeters), before further flight, rectify the clearance gap, in accordance with paragraph 3.B., "Procedure," of the Accomplishment Instructions of Bombardier Service Bulletin 84-32-121, dated May 27, 2013; and do the action in paragraph (h) of this AD at the time specified in paragraph (h) of this AD. If the clearance gap cannot be rectified in accordance with Bombardier Service Bulletin 84-32-121, dated May 27, 2013: Before further flight, repair using a method approved by the Manager, New York Aircraft Certification Office (ACO), ANE-170, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). After the repair is done, do the action in paragraph (h) of this AD at the time specified in paragraph (h) of this AD.

Note 1 to paragraphs (g) and (h) of this AD: Completion of the actions in this AD does not affect the actions specified in the existing maintenance review board (MRB) task number 320001-201.

**(h) Lubrication**

Within 1,000 flight hours or 6 months after the effective date of this AD, whichever occurs first: Lubricate the apex joints of the stabilizer brace lock link in the MLG, in accordance with paragraph 3.B., “Procedure,” of the Accomplishment Instructions of Bombardier Service Bulletin 84-32-121, dated May 27, 2013.

**(i) Other FAA AD Provisions**

The following provisions also apply to this AD:

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, New York Aircraft Certification Office (ACO), ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

**(2) Contacting the Manufacturer:** For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, New York ACO, ANE-170, FAA; or TCCA; or Bombardier, Inc.'s TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

**(j) Related Information**

Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2013-19, dated July 31, 2013, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov>. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2014-0188.

**(k) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Bombardier Service Bulletin 84-32-121, dated May 27, 2013.

(ii) Reserved.

(3) For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario



M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email  
thd.qseries@aero.bombardier.com; Internet <http://www.bombardier.com>.

(4) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:  
<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on January 14, 2015.

John P. Piccola,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

[FR Doc. 2015-01180 Filed 01/29/2015 at 8:45 am; Publication Date: 01/30/2015]